APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/892,664	06/28/2001	Steven G. Smith	BS00-353	2057

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EXAMINER
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ART UNIT	PAPER NUMBER
2654	

DATE MAILED: 03/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 June 2001*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 June 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date *5*.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   Issues arising from the language used in the immediate application require that

this explanation be provided to distinguish between the separate processes of "voice

recognition" and "speech recognition." While the term "voice" is appropriate to describe

the physical nature of input and output in general terms, "voice recognition" and "speech

recognition" are specific as to definition. "Voice recognition" identifies individuals by

sound, while "speech recognition" derives meaning from utterances. The USPTO

categorizes these separately as class/subclasses 704/246 and 704/251, respectively.

Drawings

2.   The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4)

because reference character "200" has been used to designate both "Computer" in

figure 2 and "Voice Recognition Module" in figure 3. To be consistent (with the "Audio

Input Device" that is denoted as "280" in figures 1 and 2), the Examiner is proceeding

with the understanding that "200" in figure 2 should be "100" (as in figure 1).

A proposed drawing correction or corrected drawings are required in reply to the

Office action to avoid abandonment of the application. The objection to the drawings

will not be held in abeyance.

3.   The drawings are objected to because the term "Voice" (305 in figure 3 and 410

& 420 in figure 4) should be "Speech" for the reasons given as preamble to this action.

A proposed drawing correction or corrected drawings are required in reply to the

Office action to avoid abandonment of the application. The objection to the drawings

will not be held in abeyance.

Specification

4.   The abstract of the disclosure is objected to because it is over 150 words.

Correction is required. See MPEP § 608.01(b).

5.   The disclosure is objected to because of the following informalities:

-   "Lernout & Hauspie" is misspelled (paragraph [0044] 2nd line from end page 15).

-   "Mainframe" should be one word (bottom lines pages 1 & 6).

Appropriate correction is required.

6.   The use of trademarks such as TechNet™, VoiceAction™, DragonDictate®,

ViaVoice®, Listen™ for Windows®, FreeSpeech98™, etc. (paragraph [0007] pages 3-4,

paragraph [0044] page 15) is noted in this application. Registered marks should be

capitalized wherever they appear and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

7.   The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code (as in paragraph [0044] on pages 15–16). Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.

8.   The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested:

"Speech Recognition Interface for Voice Actuation of Legacy Systems".

Claim Objections

9.   Claims 1, 5-7, 12-13, 17 objected to because the term "Voice" (page 20 lines 11 & 12, 2nd line claim 5, 1st line claim 6, page 21 line 16, page 22 line 15 and page 23 lines 1 & 16) should be "Speech" for the reasons given as preamble to this action.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

10.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Pearson

11.   Claims 16 and 18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by

Pearson (U.S. Patent 6,023,684 A).

12.   Regarding claim 16, Pearson, with the invention for a 3-tier financial transaction

system, reads on every feature of the claim for a *method for allowing a user to access*

data as follows:

- Pearson teaches the feature of *logging onto a systems interface to legacy systems*

    (by *initiating a session* column 4 line 23);

- Pearson teaches the feature of *receiving voice inputs* (with the VRU column 1 lines

    28-32);

- Pearson teaches the feature of *converting the voice inputs to a user request* (column

    1 lines 36-42);

- Pearson teaches on the feature of *sending the user request to the systems interface*

    (column 1 lines 42-45); *and*

- <u>Pearson</u> reads on the feature of *receiving data from the systems interface in response to the user request* (column 1 lines 48-49.

13.   Regarding claim 18, the claim is set forth with the same limits as claim 16. <u>Pearson</u> teaches the limitations of *converting the voice inputs to user inputs* (column 1 lines 36-41) *and converting the user inputs into the user request* (column 1 lines 42-45).

14.   Regarding claim 19, the claim is set forth with the same limits as claim 18. Recounting the existing capabilities available in other prior art to promote his invention, <u>Pearson</u> reads on the feature *of selecting an operation or providing information for an operation* (with the *menu* and inputs of column 1 lines 39-40). As the speech feature of this art is provided to illuminate the invention, this reference does not teach against the illustrated implementation of the features.

15.   Regarding claim 20, the claim is set forth with the same limits as claim 18. <u>Pearson</u> reads on the feature of *a protocol server* (the Web Server 50 in figure 2) *and a transaction server* (the Application Server 56 in figure 2).

Claim Rejections - 35 USC § 103

16.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

17.   This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

Pearson & Eberman et al

18.   Claims 1-4, 7-14, 17 and 26 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Pearson in view of Eberman et al (U.S. Patent 5,805,775 A).

19.   Regarding claims 1 and 7 as understood by the Examiner and claim 16, Pearson

reads on the features of a *system for permitting a user to remotely access data* as

follows:

-   Pearson reads on the feature of *a systems interface to a plurality of legacy systems*

    (column 1 lines 7-8), *the systems interface comprising a 1st server for managing*

    protocol (done by the Web Server 50 in figure 2) *and a 2nd server for generating*

    legacy transactions (done by the Application Server 56 in figure 2);

-   Pearson reads on the feature of *a computer operable by the user to access data*

    from the legacy systems through the systems interface (depicted in figure 2 as the

    process path 28→34→44→50→56→58-60), *where the computer is programmed*

    with a client application for accessing the systems interface (as happens *when a*

    client program initiates a logical session to access the system, column 4 lines 22-

    24), *and where the client application is adapted to format requests for information*

    based on user input (column 4 lines 28-30);

-   With regard to the singular feature that is particular to claim 7, Pearson reads on the

    feature of *a communications link coupling the computer and the means for providing*

    an interface (column 7 lines 37-39).

        Regarding the further limits of the claims, the VRU of Pearson lists the

considerations required for voice processing in promotion of his invention (column 2

lines 28 – column 3 line 32) without expressly teaching away from the feature so that his

invention in turn could use speech recognition. Consequently Pearson teaches the

feature of *a voice input device coupled to the computer* (the VRU of column 2 lines 29-33), which satisfies the requirement of claim 16, but does not provide for the further feature of claims 1 and 7, of *receiving voice.*

Eberman *et al*, with the invention of an *application user interface,* also reads on the feature of *a voice input device coupled to the computer* (150 in figure 3) and subsequently that *the computer is further programmed with a* **speech recognition** *application for receiving voice input from a user* (150 in figure 3) *where the* **speech recognition** *application is adapted to convert the voice input into data recognized by the client application* (with the processing path from 160→161→130→500→140→142→212 →110 in figure 3). It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method and/or teachings of Eberman *et al* to the device/method of Pearson so as to realize the advantage of speech input using a microphone or a telephone.

20.   Regarding claim 2, the claim is set forth with the same limits as claim 1. Pearson (column 8 lines 18-34) reads on the feature that *the computer logs into the 1st server over a wireless communications network* (the "*other physical connecting configuration*" of line 23 column 8) of which special notice is provided that *wireless communication* was well-known in the form of cellupar and cordless telephones and so would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply as a methods of initiating communication between the user computer/client and the host server/mainframe.

21.   Regarding claim 3, the claim is set forth with the same limits as claim 1.

Pearson reads on the feature that *the computer logs into the 1ˢᵗ server* (with the

procedures in column 8 lines 25-34) *over a wire line communications network* (from

phone to mainframe, column 1 lines 30-33).

22.   Regarding claims 4 and 8; the claims are set forth with the same limits as claims

1 and 7, respectively.   Pearson reads on the feature of claim 4 that *the data recognized*

by the client application includes selection of an operation (the *service call* of column 11

line 10) *and information completing a data field for the operation* (*using data* in column

11 lines 10-11).

        This same reference reads on the same features of claim 8 expressed in the

alternative regarding *the selection of an operation or the input of information into a data*

field for the operation.

23.   Regarding claim 9, the claim is set forth with the same limits as claim 7.

Pearson reads on the feature that *user requests are processed by the means for*

providing an interface in order to generate legacy transactions (done by the Application

Server 56 in figure 2);

24.   Regarding claim 10, the claim is set forth with the same limits as claim 7.

Pearson reads on the feature of *a protocol server* (the Web Server 50 in figure 2) *and a*

transaction server (the Application Server 56 in figure 2);

25.   Regarding claim 11, the claim is set forth with the same limits as claim 7.

Pearson reads on the features that *the protocol server receives the user requests* (from

28 in figure 2) *and forwards the user requests to the transaction server* (50→56 in figure

2), *and* wherein the transaction server generates legacy transactions based on the user

requests (56→58 in figure 2), receives the requested information based on the legacy

transactions (56←58 in figure 2), and forwards the requested information to the protocol

server (50←56 in figure 2).

26.   Regarding claim 12 as understood by the Examiner, Pearson reads on the

features for a *system for remotely accessing legacy data through a systems interface to*

a plurality of legacy systems (28→34→44→50→56→58/60 in figure 2) as follows:

-    Pearson reads on the feature of *a voice input device* (*VRU* of column 2 lines 29-33);

-    Pearson reads on the feature of *a modem* (column 1 lines 59-67); *and*

-    Pearson reads on the featured of *a computer* (28 in figure 2) that *includes at least*

    one memory programmed with software for performing the following:

    The VRU of Pearson presents considerations required for voice processing in

promotion of his invention (column 2 lines 28 – column 3 line 32) without expressly

teaching away from the feature so that his invention in turn could use speech

recognition. Consequently <u>Pearson</u> teaches the feature of *software for receiving a request to input by voice.*

<u>Eberman et al</u>, with the invention of an *application user interface,* also reads on the feature of *a voice input device coupled to the computer* (150 in figure 3) and subsequently on the features of *software for:*

- *activating a* **speech recognition** *module in response to the request* (150 figure 3)

- *converting voice inputs into a user request for information* (with the processing path from 160→161→130→500→140 in figure 3).

- *sending the user request for information to the systems interface* (with the processing path from 130→500→140→142→212 →110 in figure 3); *and*

- *receiving data responsive to the user request* (with the processing path from 110→20→112→112 in figure 3).

It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of <u>Eberman et al</u> to the device/method of <u>Pearson</u> so as to realize the advantage of speech input using a microphone or a telephone.

27.   Regarding claim 13 as understood by the Examiner, the claim is set forth with the same limits as claim 12. <u>Pearson</u> teaches the feature of *a client application for preparing the user request based on user inputs* (column 2 lines 1-4).

The VRU of <u>Pearson</u> operates using DTMF rather than speech recognition

understood from the specification. Consequently. <u>Pearson</u> does not read on the feature

of *speech recognition* understood by the Examiner.

<u>Eberman *et al*</u> (160 in figure 2) reads on the feature of *further comprises a*

speech recognition *application for converting the voice inputs into the user inputs.* It

would have been obvious to a person of ordinary skill in the art of speech signal

processing at the time of the invention to apply the method/teachings of <u>Eberman *et al*</u>

to the device/method of <u>Pearson</u> to provide speech input using a telephone.

28.   Regarding claim 14, the claim is set forth with the same limits as claim 12.

The features of the claim are the same as those found in claim 4 and the claim is

rejected for the same reason.

29.   Regarding claim 17, the claim is set forth with the same limits as claim 16.

<u>Pearson</u> teaches the limitations of the feature for *receiving a request for input by voice*

with the VRU (column 2 lines 28 – column 3 line 32). Without teaching away from the

first feature, <u>Pearson</u> does not mention *speech recognition.*

<u>Eberman *et al*</u>, with the invention of an *application user interface,* also reads on

the feature of *a voice input device coupled to the computer* (150 in figure 3) and

subsequently on the features of *activating a* **speech recognition** *module in response to*

the request for input by voice (150 figure 3). It would have been obvious to a person of

ordinary skill in the art of speech signal processing at the time of the invention to apply

the method/teachings of <u>Eberman *et al*</u> to the device/method of <u>Pearson</u> so as to realize

the advantage of speech input using a telephone.

Pearson, Eberman *et al* & Douglas

30.   Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over <u>Pearson</u>

in view of <u>Eberman *et al*</u> and further in view of <u>Douglas</u> (U.S. Patent 5,812,977 A).

31.   Regarding claim 5 as understood by the Examiner, the claim is set forth with the

same limits as claim 1.   <u>Pearson</u> teaches the feature where *the client application is*

adapted to present a plurality of GUI pages to the user (column 2 lines 34-51) but does

not stipulate that the *page be active.* <u>Douglas</u>, with the invention of a *voice control*

computer interface enabling implementation of common subroutines, reads on the

feature *where the* **speech recognition** *application is adapted to convert the voice input*

to data based on a GUI page that is active (column 2 lines 58 – column 3 line 1).

It would have been obvious to a person of ordinary skill in the art of speech

signal processing at the time of the invention to apply the method/teachings of <u>Douglas</u>

to the device/method of <u>Pearson & Eberman *et al*</u> to make operation intuitive, thereby

making computer users without fully developed computer skills effective.

Pearson, Eberman *et al* & Gould *et al*

32.   Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over <u>Pearson</u>

in view of <u>Eberman *et al*</u> and further in view of <u>Gould *et al*</u> (U.S. Patent 5,799,279 A).

33.   Regarding claim 6 as understood by the Examiner, neither <u>Pearson</u> nor <u>Eberman</u>

<u>et al</u> mention *multiple vocabularies*. <u>Gould *et al*</u>, with the invention for *continuous*

speech recognition of text and commands, reads on the feature that *the* **speech**

recognition *application is programmed with a plurality of vocabularies* (column 4 lines

22-44) *corresponding to a plurality of the GUI pages* (as depicted in figures 5 and 6). It

would have been obvious to a person of ordinary skill in the art of speech signal

processing at the time of the invention to apply the method/teachings of <u>Gould *et al*</u> to

the device/method of <u>Pearson</u> & <u>Eberman *et al*</u> to reduce the resources by loading only

those words necessary to the currently active application.

<u>Pearson, Eberman *et al* & Ditmer *et al*</u>

34.   Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over <u>Pearson</u>

in view of <u>Eberman *et al*</u> and further in view of <u>Ditmer *et al*</u> (U.S. Patent 6,473,407 B1).

35.   Regarding claim 15, the claim is set forth with the same limits as claim 12.

Neither <u>Pearson</u> nor <u>Eberman *et al*</u> are configured to clearly prove separate features of

GUI and communication support/layers. <u>Ditmer *et al*</u>, with the invention of an *integrated*

proxy interface for web-based management tools (in 20-22 in figure 2) arranges the

components to read on the features that *the client application includes a graphical user*

interface (GUI) layer and a communications layer (column 6 line 41).

It would have been obvious to a person of ordinary skill in the art of speech

signal processing at the time of the invention to apply the method/teachings of Ditmer _et_

_al_ to the device/method of Pearson & Eberman _et al_ in accordance with the well-known

principles of structured development, to isolate components related on a platform in

such a way that operation and maintenance of a component in one layer can be

conducted without disrupting the components in other layers that do not require change.

Conclusion

36.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

-   Liddy _et al_ (U.S. Patent 5,963,940 A) natural language information retrieval system

    and method.

-   Lewis _et al_ (U.S. Patent Publication 2003/0125956 A1) speech enabling labeless

    controls in an existing graphical user interface.

-   Skladman _et al_ (U.S. Patent 6,487,278 B1) method and system for interfacing

    systems unified messaging with legacy systems located behind corporate firewalls.

37.   Any inquiry concerning this communication or earlier communications from the

Examiner should be directed to Daniel A. Nolan at telephone (703) 305-1368 whose

normal business hours are Mon, Tue, Thu & Fri, from 7 AM to 5 PM.

If attempts to contact the examiner by telephone are unsuccessful, supervisor

Richemond Dorvil can be reached at (703)305-9645.

The fax phone number for Technology Center 2600 is (703)872-9314. Label

informal and draft communications as "DRAFT" or "PROPOSED", & designate formal

communications as "EXPEDITED PROCEDURE". Formal response to this action may

be faxed according to the above instructions,

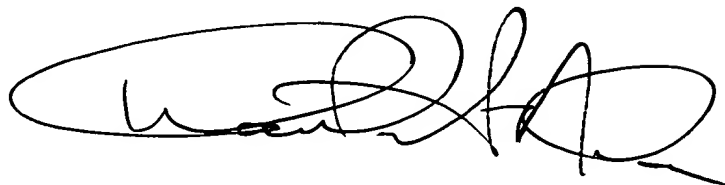or mailed to: P.O. Box 1450
                       Alexandria, VA 22313-1450

or hand-deliver to: Crystal Park 2,
                       2121 Crystal Drive, Arlington, VA,
                       Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to Technology Center 2600 Customer Service Office at

telephone number (703) 306-0377.

                                          Daniel A. Nolan
                                          Examiner
                                          Art Unit 2654

DAN/d
March 12, 2004

DANIEL NOLAN
PATENT EXAMINER